

Avaya Solution & Interoperability Test Lab

Application Notes for configuring Avaya Aura® Communication Manager R6.0.1 and Avaya Aura® Application Enablement Services R6.1.1 to interoperate with Presence Technology Presence Recording R9 - Issue 1.0

Abstract

These Application Notes describe the configuration steps for Presence Technology Presence Recording to successfully interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services. Presence Technology Presence Recording is part of the Presence Technology Presence Suite, a multi-channel contact management suite which handles voice, text chat, email and web contact mechanisms. Presence Technology Presence Recording integrates with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services using single step conferencing implemented via DMCC over TSAPI.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the compliance tested configuration using Presence Technology Presence Recording and Avaya Aura[®] Communication Manager with Avaya Aura[®] Application Enablement Services (AES). Presence Technology Presence Recording is a component of Presence Technology Presence Suite, a multi-channel contact management suite able to handle voice, e-mail and web chat contact mechanisms. Presence Technology Presence Recording uses Avaya Aura® Communication Manager's Single Step Conferencing (SSC) feature via the Device, Media, and Call Control (DMCC) service provided by the Avaya Aura® Application Enablement Services (AES) to capture the audio and call details for recording agent calls. Presence Technology Presence Recording uses the Avaya Aura® Application Enablement Services DMCC service to register a pool of virtual IP softphones that are used as "recorders". Target agents, whose calls are to be recorded, are configured in the Presence Technology Presence Recording administration tool. When a target agent places or receives a call, SSC is used to conference in a "recorder" to capture the audio stream and call details.

2. General Test Approach and Test Results

The interoperability compliance testing evaluated the ability of Presence Recording to carry out call recording in a variety of scenarios using DMCC with AES and Communication Manager.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

The interoperability compliance test included both feature functionality and serviceability testing. The feature functionality testing focused on placing and recording calls in different call scenarios with good quality audio recordings and accurate call records. The tests included:

- Call Hold
- Drop
- Blind Transfer
- Consultative Transfer
- Blind 3-way Conference
- Supervised Conference
- Bridged Appearances
- Intra switch call
- Inbound trunk call
- Outbound trunk call
- Malicious Call
- Multiple simultaneous calls
- No Answer, Engaged, Unobtainable

- Fax, Answering Machine
- Manual call clear

The serviceability testing focused on verifying the ability of Presence Recording to recover from disconnection and reconnection to the Avaya solution.

2.2. Test Results

All functionality and serviceability test cases were completed successfully

2.3. Support

Technical support can be obtained for Presence Technology Presence Suite as follows:

- Email: <u>support@presenceco.com</u>
- Website: <u>www.presenceco.com</u>
- Phone: +34 93 10 10 300

3. Reference Configuration

Figure 1 shows the network topology during interoperability testing. Avaya S8800 Server running Communication Manager with an Avaya G650 Media Gateway was used as the hosting PBX. Presence Suite with the Presence Recording component and Presence Agent PC's are connected to the LAN and recording is performed using the Single Step Conference feature of Communication Manager using DMCC provided by Application Enablement Services.

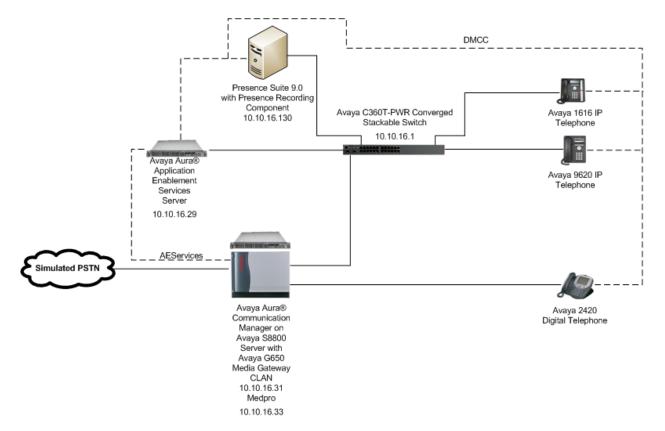


Figure 1: Avaya Aura® Communication Manager with Aura® Application Enablement Services, and Presence Technology Presence Suite Server with Presence Recording component configuration

4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment	Software
Avaya S8800 Server	Avaya Aura [®] Communication Manager
	R6.0.1 Service Pack 04
Avaya G650 Media Gateway	
CLAN -TN799DP	HW 01 FW 040
MEDPRO- TN2302AP	HW20 FW 121
Avaya S8800 Server	Avaya Aura® Application Enablement Services
	R6.1.1
Avaya 96xx Telephone (H.323)	3.1028
Avaya 16xx Telephone (H323)	1.301S
Avaya 2420 Digital Telephone	HWT=51H HWV=1 FW=4
Server	VMWare ESXi 4.1.0
	Microsoft Windows XP SP3
	Presence Suite Server 9.0.0.2
	Presence Suite Agent 9.0.0.6
	Presence Suite Recording 9.0.0.4

5. Configure Avaya Aura[®] Communication Manager

The information provided in this section describes the configuration of Communication Manager relevant to this solution. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**.

The configuration illustrated in this section was performed using Communication Manager System Administration Terminal (SAT). The configuration described in this section can be summarized as follows:

Configure Recorder/Playback Pool Stations

5.1. Configure Recorder/Playback Pool Stations

Presence Recording uses the Single Step Conferencing method to conference "recorders" with the agent calls in order to capture the call audio. Use the command **add station** to configure a station for each of the recording pool stations. On **Page 1** enter a descriptive **Name** and **Security Code**, set the **Port** to **IP**, set the **Type** to **4624** and set **IP SoftPhone** to **y**. Repeat according to the maximum number of call to be recorded simultaneously. These extensions can also be configured on Presence Recording for the playback of recordings. Configure sufficient stations to accommodate for the maximum number of simultaneous recording playback channels required.

change station 1591	Pa	ge 1 of 6
	STATION	
Extension: 1591	Lock Messages? n	BCC: 0
Type: 4624	Security Code: 1234	TN: 1
Port: IP	Coverage Path 1:	COR: 1
Name: Presenceco Recorder 1	Coverage Path 2:	COS: 1
	Hunt-to Station:	
STATION OPTIONS		
	Time of Day Lock Table:	
Loss Group: 19	Personalized Ringing Pattern:	1
	Message Lamp Ext:	1591
Speakerphone: 2-way	Mute Button Enabled?	У
Display Language: english		-
Survivable GK Node Name:		
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	IP SoftPhone?	У
	IP Video Softphone?	n
Shor	t/Prefixed Registration Allowed:	default

6. Configure Presence Suite Presence Recording

The Presence Recording component of Presence Suite must be configured in order to connect with AES. The application notes assume that the Presence Server has already been properly configured and the AES user was set up. The AES credentials used for the Presence Server configuration can be reused here. Refer to **Section 9** for documentation on the configuration of Presence Suite.

6.1. Configure Telephony, Storage and CTI Parameters

From the Presence server, navigate to c:\Presence\ and double click on precservercfg.exe, the screen below will appear. In the Ports section, configure a Recording Server port, enter the IP address of the Presence Server and the port used for connection. Tick the Integrated with Presence Server box, and select DMCC extensions from the Channel type drop-down box.

P	resence Recor <mark>ding Ser</mark>	ver Configuration	×
	General	General	
	General Backup servers Storage Channels Alerts Tracing Server Backup Server Service Storage Server	General Configure Recording Server as slave Ports Recording Server: Backup Recording Server: Fresence Server Integrated with Presence Server IP address: 10.10.16.130 Port: 6100 Channel type: DMCC extensions Maximum recording duration (in seconds). 0	
		Encrypt recording files	
		OK Cancel	

Click on **Storage** in the left-hand pane and enter an appropriate directory in the **Director to store recording** field.

Presence R	lecor <mark>ding Ser</mark>	ver Configuration	×
General		Storage	
Backup	servers	Time interval of Presence Backup to store recordings on tape (in	
Storage		seconds):	
Channels Alerts	\$	Configuration of disk space in which recordings will be stored and from which they will be retrieved.	
Tracing		Directory to store recordings:	
Serve	r	C:\Recordings\Records	
Back	up Server	Directory to store recordings retrieved from tape: C:\Recordings\Retrieves	
Servio	-	Alternative directories to search for recordings:	
Storag	ge Server		
		Space for recordings:	
		Space for recordings retrieved: 10 %	
		Minimum free space: 10 %	
		OK Cancel	

Click on **Channels** in the left-hand pane. In the **DMCC Server** section enter the IP address of the AES server and the AES user configured for the Presence Suite installation, enter the port configured for connectivity to AES (the default is **4721**). In the **DMCC channel configuration** section, click **Add**.

General Channels Backup servers DMCC Server Storage IP address: 10.10.16.29 Channels User: Presenceco Alerts Password: *******	×
Storage DMCC Server IP address: 10.10.16.29 Channels User: Presenceco	
Tracing DMCC channel configuration Backup Server Base port to receive RTP packets: Service Extension Storage Server Up 1 Add Edit	
OK Cance	

Enter a valid recording channel **Extension** and **Password** as configured in **Section 5.1**. Enter the **CLAN IP address** and select **Recording** from the **Usage** drop-down box. Click **OK** when done. Repeat as necessary. For playback channels, select **Playback** from the **Usage** drop-down box.

Pı	resence Recording Ser	ver Configuration	×
	General	Channels	
	Backup servers	DMCC Server	
	Storage	IP address: 10.10.16.29 Port	4721
	Channels	User: Presenceco	
	Alerts		
	Tracing	Password: *****	
	Server	Channel 🗾 🗾	
	Backup Server	Channel information	
	Service	Extension: 🗖 +1 1591	
	Storage Server	Password:	
		Usage: Recording	Up î
		CLAN IP address: 10.10.16.31	Down ↓
		OK Cancel Apply	
		ОК	Cancel

The screen shown below will appear, displaying all recording and playback channels, click **OK** when done.

Presence Recording Serv	ver Configuration	X
General	Channels	
Backup servers Storage	DMCC Server IP address: 10.10.16.29 Port: 4721	1
Channels		
Alerts	User: Presenceco	
Tracing	Password: J******	
Server	DMCC channel configuration	1
Backup Server	Base port to receive RTP packets: 50000	
Service	Extension Usage CLAN IP address	
Storage Server	1592 Recording 10.10.16.31 1593 Recording 10.10.16.31 1594 Recording 10.10.16.31 1595 Recording 10.10.16.31 1596 Playback 10.10.16.31	
	Add Edit Remove]
	OK Cancel	

6.2. Configure Recording Plan

Recording plans must be configured according to the call recordings required. Using the Presence Supervisor application, click on **Recordings** \rightarrow **Plans** \rightarrow **New**. In the displayed **Plan Inbound service recording plan** window, assign an identifying **Name** and set the **Percentage** to record as required, in this case 100%. Configure the **Start** and **End** parameters as appropriate.

Plan Inbound service rec	cording plan	۲
General Services Groups	General General	
	Name: Inbound service recording plan	
	Resource profile: General	
	Percentage to record: 100 %	
	Start: C Immediately C Date 30/11/2011 11:35	
	End: 💽 Indeterminate 🔿 Date	
	OK Cancel Apply	

Click on Services in the left-hand pane, enter 1 in the Service ID box and click the plus icon.

Plan Inbound service reco	ording plan	1
Services	Services	
😝 Groups	Service id: 1	
	🕂 🗶 🛷	
	Code 🛆 Name Type	
	OK Cancel Apply	

This will add the relevant configured service to the recording plan, in this case **INBOUND SERVICE**. Click **OK** when done. Repeat as necessary for additional recording plans.

Plan Inbound service rec	ording plan	×
 General Services Groups 	Services	
	Service id:	
	Code Name I INBOUND SERVICE	Type Inbound
		á – tu
	OK Cancel	Apply

The screen below will be displayed, summarizing the added recording plans. Note that the status shows **Disabled.**

🧶 Recordir	ng plans							
- 	2	×				-		
New	Edit	Delete	Enable	Disable	Move up	Move down	l	
Name				Status	Start date		End date	Percentage
Inbound serv	ice recording	g plan		Disabled	30/11	/11 11:35:19	Not specifie	d 100 %
Outbound se	rvice recordi	ng plan		Disabled	30/11	/11 15:22:40	Not specifie	d 100%

Select each one in turn and click **Enable**, the status will now appear as **Enabled**.

_ _	72	X				+			
New	Edit	Delete	Enable	Disable	Move up	Move down			
Name				Status	Start date		End date		Percentage
Inbound serv	ice recording	plan		Enabled	30/11	/11 11:35:19		Not specified	100 %
Outbound se	rvice recordir	ng plan		Enabled	30/11	/11 15:22:40		Not specified	100 %

Calls that are placed via either of these Services will be recorded according to the recording plan configured above.

7. Verification Steps

This section provides the tests that can be performed to verify correct configuration of the Avaya and Presence Technology solution.

7.1. Verify Avaya Aura® Communication Manager CTI Service State

The following steps can validate that the communication between Communication Manager and the Application Enablement Services is functioning correctly. Check the AESVCS link status with Application Enablement Services by using the command **status aesvcs cti-link**. Verify the **Service State** of the CTI link is **established**.

statu	s aesvcs ct	i-link				
			AE SERVICES C'	TI LINK STATUS		
CTI Link	Version	Mnt Busy	AE Services Server	Service State	Msgs Sent	Msgs Rcvd
1	4	no	devconaes611	established	18	18

7.2. Verify TSAPI Link and DMCC

7.2.1. Verify TSAPI Link

On the Application Enablement Services Management Console verify the status of the TSAPI link by selecting Status \rightarrow Status and Control \rightarrow TSAPI Service Summary to display the TSAPI Link Details screen. Verify the status of the TSAPI link by checking that the Status is Talking and the State is Online.

AVAYA	Application Enablement Services Management Console							Welcome: User craft Last login: Thu Dec 15 19:33:46 2011 from 10.10.16.62 HostName/IP: devconaes611/10.10.16.29 Server Offer Type: TURNKEY SW Version: r6-1-1-30-0				
Status Status and Contro	ol (TSAPI Sei	rvice Si	immary							Hor	ne Hel	p Logo
 AE Services Communication Manage Interface Licensing 	13		k Details age refresh evi	ery 60 💌	seconds							
 Maintenance Networking Security 		Lin	switch Name	Switch CTI Link ID	Status	Since	State	Switch Version	Associations		Msgs from Switch	Msgs Period
▼ Status Alarm Viewer		0 1	CM521	1	Talking	Wed Dec 14 16:03:39 2011	Online	15	0	15	15	30
► Logs			CM601	1	Talking	Wed Dec 14 16:10:07 2011	Online	16	8	71	87	30
 Status and Control CVLAN Service Sum DLG Services Sum DMCC Service Sum Switch Conn Summ TSAPI Service Sum 	nmary For nary For mary I nary I		Offline vide informatio rvice Status	<i>i</i>		llowing: Jser Status						

7.2.2. Verify Avaya Aura® Application Enablement Services DMCC Service

The following steps are carried out on the Application Enablement Services to validate that the communication link between AES and the Presence Recording server is functioning correctly. Verify the status of the DMCC service by selecting Status \rightarrow Status and Control \rightarrow DMCC Service Summary. The DMCC Service Summary – Session Summary screen is displayed as shown below. It shows a connection to the Presence Recording server, IP address 10.10.16.130. The Application is shown as precserver.exe, and the Far-end Identifier is given as the IP address 10.10.16.130 as expected. The User is shown as the user created for the CTI user for Presence Server, in this case Presenceco.

AVAYA	Application Enablement Services Welcome: User craft Last login: Thu Feb 9 18:22:30 2012 from 10.10.16.13 Management Console Server Offer Type: TURNKEY SW Version: r6-1-1-30-0
Status Status and Conti	rol IDMCC Service Summary Home Help Logo
► AE Services	
Communication Manag	er DMCC Service Summary - Session Summary
Licensing	Enable page refresh every 60 💌 seconds
▶ Maintenance	Session Summary Device Summary
▶ Networking	Generated on Fri Feb 10 10:45:27 GMT 2012
▶ Security	Service Uptime: 10 days, 18 hours 14 minutes Number of Active Sessions: 1
▼ Status	Number of Sessions Created Since Service Boot: 7
Alarm Viewer	Number of Existing Devices: 3 Number of Devices Created Since Service Boot: 21
 Logs Status and Control 	Session ID User Application Far-end Connection # of Associated Identifier Type Devices
 CVLAN Service Sur 	/ JF6BE32A9D86UAB-6
 DLG Services Sum DMCC Service Su 	Terminate Sessions Show Terminated Sessions
 Switch Conn Sumr 	
 TSAPI Service Sum 	
▶ User Management	
Utilities	
▶ Help	

7.3. Verify Presence Suite CTI Connection

One of the available methods to confirm correct startup is a startup log which can be accessed from Presence Management Console. Navigate to $C: \rightarrow Presence \rightarrow pmconsole.exe$. A startup log commences when the Presence Server is trying to load and connect to the Application Enablement Services. Click on the item named Server@127.0.0.1:6800 in the PCP Server Connections pane of the Management Console. To open the startup event log, double click Show startup event log in the Actions pane.

II Presence Management Console								
<u>File Edit Show</u>	<u>W</u> indows <u>H</u> elp							
Windows 🗜 🗙		₽ X	PCP Server Connections	д	×			
	Show startup event log Show information event log Show warning event log Show error event log Show server information Show service automatic prediction List service agents List service calls List services List enabled services List inbound services		I-Server@127.0.0.1:6800 I-Server@127.0.0.1:6805 I-Server@127.0.0.1:6805					

Verify successful CTI connection and service startup.

Show startup event log	×
1-Server@127.0.0.1:6800 => SHOW LOG STARTUP	e 🔒
<pre>16/12 14:46:47 Server started 16/12 14:46:47 Service INBOUND SERVICE loaded 16/12 14:46:47 Loading inbound services (1 services) 16/12 14:46:46 Loading outbound services (1 services) 16/12 14:46:46 Updating agent connection records 16/12 14:46:46 Connecting to database 16/12 14:46:46 Connected to primary CTI link AVAYA#CM601#CSTA#DEVCONAES611 16/12 14:46:45 Connecting to CTI link 16/12 14:46:45 Initializing server</pre>	
Last update: 16/12/2011 14:57:54:298	

Repeat the above for the item named **Recording Server@127.0.0.1:6805**.

Show startup event log	×
2-Recording Server@127.0.0.1:6805 => SHOW LOG STARTUP 2	H
<pre>15/02 09:33:46 Presence Recording Server started 15/02 09:33:46 Initializing structures for groups 15/02 09:33:45 Encrypting pending recordings 15/02 09:33:45 Encrypting pending recordings 15/02 09:33:45 Encrypting pending recordings 15/02 09:33:45 Encrypting pending recordings 15/02 09:33:45 Presence Recording Slave successfully started 15/02 09:33:39 Opening communications port for requests 15/02 09:33:39 Opening communications port for requests 15/02 09:33:39 Initializing playback channels 15/02 09:33:38 Initializing playback channels 15/02 09:33:38 Initializing recording channels 15/02 09:33:34 TSF NOT loaded 15/02 09:33:33 Retrieving channel device 15/02 09:33:33 Retrieving channel configuration information 15/02 09:33:33 Retrieving presence Recording Slave in local mode 15/02 09:33:33 Retrieving presence Recording Slave in local mode 15/02 09:33:33 Registering Presence Recording Server 15/02 09:33:33 Registering to CTI link AVAYA#CM601#CSTA#DEVCONAES611 15/02 09:33:31 Connecting to CTI link 15/02 09:33:31 Connecting to the database 15/02 09:33:31 Connecting to Presence Server 15/02 09:33:31 Starting Presence Recording Server</pre>	
Last update: 15/02/2012 10:29:09:562	

7.4. Verify Presence Recording Capture and Playback

Using Presence Supervisor, click **Recordings** \rightarrow **Play**, visually verify correct recording detail as shown below.

ile Window=	Help										_	
Monitors	🕂 🖓 🗶	2 <	s 🕨 🔹 (6j 🕼	20 🙀	🗎 😓 👘						
Outbound	Queries	Rec	ordings for	query	From O	ct-2011 to Feb	o-2012					
Inbound	Description 🛆	Audio	ID △	Quali	fication c D)ate	Service	Group id	Extension	n Agent		Dural
Agents	From Oct-2011 to Feb-2012			1	100	30/11/11 11:36:		1	0	4001	201	-
Recordings				2	100	30/11/11 11:36:		1	0	4001	201	
11000010illigo	-			3	100	30/11/11 14:14:		1	0	4001	201	
				4	100	30/11/11 14:14:		1	0	4001	201	
				5	100	30/11/11 14:46:		1	0	4001	201	
				6	100	30/11/11 15:13:		1	0	4001	201	
Groups	•			7	100	30/11/11 15:14:		1	0	4002	202	
-00				8	7	30/11/11 15:21:		1	0	4001	201	
503				9 10	0	30/11/11 15:25: 30/11/11 15:29:		1	0	4000	0	
40				10	100 100	30/11/11 15:29:		1	0	4001 4001	201 201	
Plans	Folders			2	100	30/11/11 15:29:		1	0	4001	201	_
	Folders 🛆			3	100	30/11/11 15:41:		1	0	4002	202	
				14	100	30/11/11 15:41:		1	0	4002	201	
				15	100	30/11/11 15:41:		1	ů.	4001	201	
Play				16	100	30/11/11 15:43:		1	ů O	4001	201	
		la -		17	100	30/11/11 15:44:		1	Ō	4002	202	
			1	18	100	30/11/11 15:45:	19	1	0	4001	201	
Reports			1	19	100	30/11/11 15:46:	11	1	0	4001	201	
riepoits		la l	2	20	100	30/11/11 15:50:	46	1	0	4001	201	
			2	21	100	30/11/11 15:53:	59	1	0	4001	201	
												Ð
		No. of	recordings:	71		Current pos.:	12	Last update:	15.	/02/2012 09:37:4	5	_
		1 Re	 lated recordi	ngs								
		Audio	ID	Quali	fication c D)ate	Service	Group id	Extension	n Agent		Durati
			1	10	100	30/11/11 15:29:	00	1	0	4001	201	
			1	12	100	30/11/11 15:29:	26	1	0	4002	202	
		•										

Double click on the recording to be played, the pop up shown below will be displayed with the prompt to dial a playback extension,

Playback extension								
Dial extension 1596								
Cancel								

Dial the number shown and manually confirm accurate, clear and audible call recording playback. The screen below will be displayed allowing playback control.

Recording playback	X				
ID: 12					
• J	00:00:02700:01:02/30/11/2011/15:29				
▶ 🔳 88 48 8Þ 84 Þ8	🥅 Auto play				
1 Information					
Service: 1 INBOUND SERVIC	Œ				
Agent: 202 Agent 202					
Customer phone no.: 4001	Type: Incoming				
Qualification code: Positive (+)					
Station: 4002	VDN/CDN: 1804				
Recording plan: Inbound service reco	ording plan				
Recording ext.: 1592	Contact Id: 411				

8. Conclusion

These Application Notes describe the configuration steps required for Presence Technology Presence Recording to successfully interoperate with Avaya Aura® Communication Manager R6.0.1 using Avaya Aura® Application Enablement Services R6.1.1. All feature functionality and serviceability test cases were completed successfully with observations noted in **Section 2.2**.

9. Additional References

This section references the Avaya and Presence Technology Presence Suite product documentation that are relevant to these Application Notes.

Product documentation for Avaya products may be found at http://support.avaya.com.

 [1] Application Notes for Presence Technology Presence Suite R9.0 with Avaya Aura® Communication Manager R6.0.1 and Avaya Aura® Application Enablement Services R6.1.1 - <u>http://devconnect.avaya.com/public/download/dyn/Pres9AES611.pdf</u>

The following documentation is available on request from Presence: http://www.presenceco.com

- [2] Presence Administrator Manual Presence Suite, V9
- [3] Presence Installation Guides Presence Software, V9
- [4] PBX/ACD Requirements Presence Software, V9

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